

SYSTEMS AND METHODS FOR ADJUSTING TRANSMIT POWER IN  
WIRELESS LOCAL AREA NETWORKS

Abstract of the Disclosure

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A communication station performs closed-loop transmit power control and adjusts its transmit power level based on an access point sensitivity, a path loss and/or a link margin variation. An average received power level of orthogonal frequency-division multiplexed (OFDM) subcarriers of an OFDM 10 channel may be measured at the communication station, and the path loss may be estimated from an access point transmit power level and the measured power level. The communication station may request an access point's transmit power level and link margin from the access point prior to estimating the path loss. The communication station may calculate the access point sensitivity by subtracting 15 the path loss and the access point link margin from the communication station's transmit power level. The link margin variation may be estimated from an access point transmit power variation, an indoor path loss variation, and/or a receiver power measurement error of the communication station.

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